IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft BizTalk Server Agent
6.3.1 Fix Pack 10
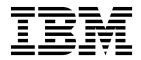
Installation and Configuration Guide

IBM

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Applications: Microsoft BizTalk Server Agent
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Installation and Configuration Guide

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Chapter 1. Overview of the agent

The IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft BizTalk Server Agent (product code QB) provides you with the capability to monitor Microsoft BizTalk Server. You can also use the agent to take basic actions with the Microsoft BizTalk Server.

IBM® Tivoli® Monitoring is the base software for the Microsoft BizTalk Server agent.

IBM Tivoli Monitoring

IBM Tivoli Monitoring provides a way to monitor the availability and performance of all the systems in your enterprise from one or several designated workstations. It also provides useful historical data that you can use to track trends and to troubleshoot system problems.

You can use IBM Tivoli Monitoring to achieve the following tasks:

- Monitor for alerts on the systems that you are managing by using predefined situations or custom situations.
- Establish your own performance thresholds.
- Trace the causes leading to an alert.
- Gather comprehensive data about system conditions.
- Use policies to take actions, schedule work, and automate manual tasks.

The Tivoli Enterprise Portal is the interface for IBM Tivoli Monitoring products. You can use the consolidated view of your environment as seen in the Tivoli Enterprise Portal to monitor and resolve performance issues throughout the enterprise.

See the IBM Tivoli Monitoring publications listed in "Prerequisite publications" on page 19 for complete information about IBM Tivoli Monitoring and the Tivoli Enterprise Portal.

Functions of the monitoring agent

Availability and resource monitoring
> Monitors the following components, indicating when the status is down:
> - BizTalk Server Host Instances
> - Base EDI
> - Enterprise Single Sign-On
> - Rule Engine Update
> - BizTalk Sharepoint Messaging Adapter
> - BizTalk Application Status
> - Send Ports
> - Send Port Groups
> - Orchestrations
> - Receive Locations
> - Service Instances
> - Microsoft BizTalk RFID Service

Error and event log monitoring
> Monitors the following event sources for collecting data related to errors and events that affect the BizTalk Server availability or performance:

- BizTalk Server 2006
- BizTalk DW Reporting
- BizTalk Server Deployment
- BusinessRulesEngine
- BizTalk Server 2004
- BizTalk Server 2004 Deployment
- EDI Subsystem
- EDI Receiver
- EDI Subsystem
- EDI Transmitter
- ENTSSO
- HWS
- HWS WMI
- BAM EventBus Service
- Bam Aggregated Event Provider
- Bam Event Provider
- BamManagementUtility
- BAM Portal
- BAM Web Service
- BAMWebServices
- BITS Extensions
- RuleEngineUpdateService
- TDDSEventBusMgmt
- Windows SharePoint Services 2.0
- Windows SharePoint Services 3
- Windows SharePoint Services 3 Error Reporting
- Windows SharePoint Services 3 Search
- XLANG/s
- MSSQLServer
- BizTalk Server 2009
- BizTalk Server 2009 EDI
- Microsoft BizTalk Adapter Pack v2.0
- Microsoft BizTalk Bam Interceptors
- BizTalk Server
- BizTalk Server EDI
- MSBizTalkRFID

Performance monitoring

Collects performance attributes in the following areas, providing situations where appropriate:

- Tracking Data Decode Service (TDDS), also know as BAM Event Bus
- Messaging
- Human Workflow Services
- Orchestrations
- MessageBox
- Adapters
- Host Throttling

- BizTalk .NET Adapter for SAP
- BizTalk .NET Adapter for Oracle DB
- BizTalk .NET Adapter for Siebel
- BizTalk Adapter for Oracle E-Business Suite
- BizTalk Adapter for SQL
- BizTalk databases attribute groups, such as BAM Database, Management Database, MessageBox Database, Single Sign-On Database, Tracking Database, and Rule Engine Database
- Configuration and Status
- Microsoft BizTalk RFID Server

Note: The attribute groups related to Adapters and Host Throttling, and situations based on these attribute groups are not applicable for BizTalk Server 2004.

Actions

Provides actions to start and stop the following services:
- BizTalk Server Host Instances
- Rule Engine Update Service
- BizTalk Base EDI Service
- BizTalk SharePoint Messaging Adapter Service
- Microsoft BizTalk RFID Service

Historical data

Provides a history enablement file that enables the agent to generate reports for all attributes that are collected.

New in this release

For version 6.3.1.10 of the Microsoft BizTalk Server agent, no new features were added since 6.3.1. For version 6.3.1 of the Microsoft BizTalk Server agent, the following enhancements have been made since version 6.3, including the fix packs:

- Changes related to system requirements. See the information about system requirements in the Software product compatibility reports (http://publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/index.html)
- New attribute groups:
  - Receive Ports
  - SFTP Receive Adapter
  - SFTP Send Adapter
- New Take Action commands:
  - Enlist Send Port action
  - Unenlist Send Port action
  - Enlist Send Port Group action
  - Unenlist Send Port Group action
  - Disable Receive Location action
  - Enlist Orchestration action
  - Unenlist Orchestration action
  - Stop Orchestration action
- Updated the `kqb.baroc` file to support event mapping changes
- Added the Prerequisite Scanner report to verify the availability of tables and views in the Tivoli Data Warehouse for the predefined reports
- Added new Cognos® data models and reports

Components of the IBM Tivoli Monitoring environment

After you install and set up the Microsoft BizTalk Server agent, you have an environment that contains the client, server, and monitoring agent implementation for Tivoli Monitoring.

This Tivoli Monitoring environment contains the following components:

Tivoli Enterprise Portal client
The portal has a user interface based on Java™ for viewing and monitoring your enterprise.

Tivoli Enterprise Portal Server
The portal server is placed between the client and the Tivoli Enterprise Monitoring Server and enables retrieval, manipulation, and analysis of data from the monitoring agents. The Tivoli Enterprise Portal Server is the central repository for all user data.

Tivoli Enterprise Monitoring Server
The monitoring server acts as a collection and control point for alerts received from the monitoring agents, and collects their performance and availability data. The Tivoli Enterprise Monitoring Server is also a repository for historical data.

Tivoli Enterprise Monitoring Agent, Microsoft BizTalk Server agent
This monitoring agent collects data and distributes the data to the Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, Tivoli Enterprise Portal, Tivoli Data Warehouse, and Tivoli Integrated Portal.

IBM Tivoli Netcool/OMNIbus
Tivoli Netcool/OMNIbus is an optional component and the recommended event management component. The Netcool/OMNIbus software is a service level management (SLM) system that delivers real-time, centralized monitoring of complex networks and IT domain events. Event information is tracked in a high-performance, in-memory database and presented to specific users through individually configurable filters and views. The software includes automation functions that you can use to perform intelligent processing on managed events. You can use this software to forward events for Tivoli Monitoring situations to Tivoli Netcool/OMNIbus.

IBM Tivoli Enterprise Console®
The Tivoli Enterprise Console is an optional component that acts as a central collection point for events from various sources, including events from other Tivoli software applications, Tivoli partner applications, custom applications, network management platforms, and relational database systems. You can view these events through the Tivoli Enterprise Portal (by using the event viewer), and you can forward events from Tivoli Monitoring situations to the Tivoli Enterprise Console component. If you do not already use Tivoli Enterprise Console and need an event management component, you can choose to use IBM Tivoli Netcool/OMNIbus.

IBM Tivoli Common Reporting
Tivoli Common Reporting is a separately installable feature available to users of Tivoli software that provides a consistent approach to generating and customizing reports. Some individual products provide reports that are designed for use with Tivoli Common Reporting and have a consistent look and feel.

IBM Tivoli Application Dependency Discovery Manager (TADDM)
TADDM delivers automated discovery and configuration tracking capabilities to build application maps that provide real-time visibility into application complexity.

IBM Tivoli Business Service Manager
The Tivoli Business Service Manager component delivers real-time information to help you respond to alerts effectively based on business requirements. Optionally, you can use this component to meet service-level agreements (SLAs). Use the Tivoli Business Service Manager tools to help build a service model that you can integrate with Tivoli Netcool/OMNIbus alerts or optionally integrate with data from an SQL data source. Optional components provide access to data from other IBM Tivoli applications such as Tivoli Monitoring and TADDM.

Tivoli Integrated Portal
> Tivoli Integrated Portal helps the interaction and secure passing of data between Tivoli products through a common portal. Within the same dashboard view, you can launch from one application to another and research different aspects of your managed enterprise. This component is installed automatically with the first Tivoli product that uses the Tivoli Integrated Portal framework. Subsequent products can install updated versions of Tivoli Integrated Portal. After version 2.2, this component is replaced by the Dashboard Application Services Hub.

Agent Management Services

You can use IBM Tivoli Monitoring Agent Management Services to manage the Microsoft BizTalk Server agent.

Agent Management Services is available for the following IBM Tivoli Monitoring OS agents: Windows, Linux, and UNIX. The services are designed to keep the Microsoft BizTalk Server agent available, and to provide information about the status of the product to the Tivoli Enterprise Portal. For more information about Agent Management Services, see *Agent Management Services* in the *IBM Tivoli Monitoring Administrator's Guide*. IBM Tivoli Monitoring V6.2.2, Fix Pack 2 or later provides support for Agent Management Services.

User interface options

Installation of the base IBM Tivoli Monitoring software and other integrated applications provides various interfaces that you can use to work with your resources and data.

The following interfaces are available:

Tivoli Enterprise Portal user interface
> You can run the Tivoli Enterprise Portal as a desktop application or a browser application. The client interface is a graphical user interface (GUI) based on Java on a Windows or Linux workstation. The browser application is automatically installed with the Tivoli Enterprise Portal Server. The desktop application is installed by using the Tivoli Monitoring installation media or with a Java Web Start application. To start the Tivoli Enterprise Portal browser client in your Internet browser, enter the URL for a specific Tivoli Enterprise Portal browser client installed on your web server.

Command-line interface
> You can use Tivoli Monitoring commands to manage the Tivoli Monitoring components and their configuration. You can also run commands at the Tivoli Enterprise Console event server or the Tivoli Netcool/OMNIbus ObjectServer to configure event synchronization for enterprise situations.

Manage Tivoli Enterprise Monitoring Services window
> You can use the window for the Manage Tivoli Enterprise Monitoring Services utility to configure the agent and start Tivoli services not designated to start automatically.

IBM Tivoli Netcool/OMNIbus event list
> You can use the Netcool/OMNIbus event list to monitor and manage events. An event is created when the Netcool/OMNIbus ObjectServer receives an event, alert, message, or data item. Each event is made up of columns (or fields) of information that are displayed in a row in the ObjectServer alerts.status table. The Tivoli Netcool/OMNIbus web GUI is also a web-based application that processes network events from one or more data sources and presents the event data in various graphical formats.

IBM Tivoli Enterprise Console
> You can use the Tivoli Enterprise Console to help ensure the optimal availability of an IT service for an organization. The Tivoli Enterprise Console is an event management application that

integrates system, network, database, and application management. If you do not already use Tivoli Enterprise Console and need an event management component, you can choose to use Tivoli Netcool/OMNIbus.

IBM Tivoli Common Reporting
Use the Tivoli Common Reporting web user interface for specifying report parameters and other report properties, generating formatted reports, scheduling reports, and viewing reports. This user interface is based on the Dashboard Application Services Hub for Tivoli Common Reporting 3.1 and on Tivoli Integrated Portal for earlier versions.

IBM Tivoli Application Dependency Discovery Manager
The Discovery Management Console is the TADDM client user interface for managing discoveries.

IBM Tivoli Business Service Manager
The Tivoli Business Service Manager console provides a graphical user interface that you can use to logically link services and business requirements within the service model. The service model provides an operator with a second-by-second view of how an enterprise is performing at any moment in time or how the enterprise performed over a time period.

Tivoli Integrated Portal
Web-based products that are built on the Tivoli Integrated Portal framework share a common user interface where you can launch applications and share information. After version 2.2, this interface is replaced by the Dashboard Application Services Hub.

Data sources

Monitoring agents collect data from specific data sources.

The Microsoft BizTalk Server agent collects data from the following sources:

Perfmon
You can use the Windows Performance Monitor, or Perfmon, to view various system and application performance metrics for collection and use by management applications. You typically view system metrics on a Windows system through the 'perfmon' application.

Availability
You can use the agent to monitor availability of the application and related components in the following ways:
* Monitor the Windows services used by the application.

Scripts
You can use the agent's application-specific commands and interfaces to gather metrics.

Windows Event Log
You can use the agent to collect Windows Event Log entries that are related to the monitored resource and forwards them to IBM Tivoli Monitoring.

The following table shows each attribute group and the mechanism that is used to gather the attributes.

Table 1. Mechanisms used to gather attributes

Attribute group	Collection source
Availability	Windows services and processes
Event Log	Windows Event Log
Performance Object Status	Agent
Host Throttling	Perfmon
TDDS	Perfmon

Table 1. Mechanisms used to gather attributes (continued)

Attribute group	Collection source
Human Workflow Services	Perfmon
Orchestrations	Perfmon
Messaging	Perfmon
Messaging Latency	Perfmon
Message Box General Counters	Perfmon
Message Box Host Counters	Perfmon
File Receive Adapter	Perfmon
File Send Adapter	Perfmon
FTP Receive Adapter	Perfmon
FTP Send Adapter	Perfmon
POP3 Receive Adapter	Perfmon
SMTP Send Adapter	Perfmon
HTTP Receive Adapter	Perfmon
HTTP Send Adapter	Perfmon
SOAP Receive Adapter	Perfmon
SOAP Send Adapter	Perfmon
Windows SharePoint Services	Perfmon
MSMQ Receive Adapter	Perfmon
MSMQ Send Adapter	Perfmon
SQL Receive Adapter	Perfmon
SQL Send Adapter	Perfmon
BizTalk NET Adapter for Oracle DB	Perfmon
BizTalk NET Adapter for Oracle EBusiness Suite	Perfmon
BizTalk NET Adapter for SAP	Perfmon
BizTalk NET Adapter for Siebel	Perfmon
BizTalk NET Adapter for SQL	Perfmon
Windows SharePoint Services Adapter	Perfmon
Messagebox Database	WMI
Management Database	WMI
Rule Engine Database	Script
Single Sign On Database	Script
BAM Database	WMI
Tracking Database	WMI
Application Status	Custom Code
Send Port Status	WMI
Orchestration Status	WMI
Receive Location Status	WMI
Service Instance Status and Class	WMI
BizTalk Group Server Host	WMI
BAM Interceptor	Perfmon

Table 1. Mechanisms used to gather attributes (continued)

Attribute group	Collection source
Distributors	WMI
Events	WMI
Subscriptions	WMI
Notifications	WMI
Delivery Channels	WMI
Event Providers	WMI
Generator	WMI
Vacuumer	WMI
RFID Devices	Perfmon
RFID Processes	Perfmon
Send Port Group Status	WMI
BizTalk Host	WMI
BizTalk Server	WMI
Receive Ports	WMI
SFTP Receive Adapter	Perfmon
SFTP Send Adapter	Perfmon

Chapter 2. Agent installation and configuration

Agent installation and configuration requires the use of the *IBM Tivoli Monitoring Installation and Setup Guide* and agent-specific installation and configuration information.

To install and configure the Microsoft BizTalk Server agent, use the *Installing monitoring agents* procedures in the *IBM Tivoli Monitoring Installation and Setup Guide* along with the agent-specific installation and configuration information.

If you are installing silently by using a response file, see *Performing a silent installation of IBM Tivoli Monitoring* in the *IBM Tivoli Monitoring Installation and Setup Guide*.

With the self-describing agent capability, new or updated IBM Tivoli Monitoring agents using IBM Tivoli Monitoring V6.2.3 or later can become operational after installation without having to perform additional product support installation steps. To take advantage of this capability, see *Enabling self-describing agent capability at the hub monitoring server* in the *IBM Tivoli Monitoring Installation and Setup Guide*. Also, see *Self-describing monitoring agents* in the *IBM Tivoli Monitoring Administrator's Guide*.

Requirements

Before installing and configuring the agent, make sure your environment meets the requirements for the IBM Tivoli Composite Application Manager for Microsoft Applications: Microsoft BizTalk Server Agent.

For the most up-to-date information about system requirements, see the Software product compatibility reports (http://www-969.ibm.com/software/reports/compatibility/clarity/index.html). Search for the ITCAM for Microsoft Applications product.

Installing language packs

The steps for installing language packs depend on which operating system and mode of installation you are using.

To install a language pack for the agent support files on the Tivoli Enterprise Monitoring Server, the Tivoli Enterprise Monitoring Agent, and the Tivoli Enterprise Portal Server, make sure that you installed the product in the English language. Then use the steps for the operating system or mode of installation you are using:
- "Installing language packs on Windows systems"
- "Installing language packs on UNIX or Linux systems" on page 10
- "Installing language packs on Windows, UNIX, or Linux systems silently" on page 10

Installing language packs on Windows systems

You can install the language packs on a Windows system.

Before you begin

First, make sure that you installed the product in the English language.

Procedure
1. On the language pack CD, double-click the `lpinstaller.bat` file to start the installation program.
2. Select the language of the installer and click **OK**.
3. In the Introduction panel, click **Next**

4. Click **Add/Update** and click **Next**.

5. Select the folder where the National Language Support package (`NLSPackage`) files are located. Typically, the NLSPackage files are located in the `nlspackage` folder where the installer executable file is located.

6. Select the language support for the agent of your choice and click **Next**. To make multiple selections, press Ctrl and select the language that you want.

7. Select the languages that you want to install and click **Next**.

8. Examine the installation summary page and click **Next** to begin installation.

9. After installation completes, click **Finish** to exit the installer.

10. Restart the Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Eclipse Help Server if any of these components are installed.

Installing language packs on UNIX or Linux systems

You can install the language packs on a UNIX or Linux system.

Before you begin

First, make sure that you installed the product in the English language.

Procedure

1. Enter the `mkdir` command to create a temporary directory on the computer, for example, `mkdir` *dir_name*. Make sure that the full path of the directory does not contain any spaces.

2. Mount the language pack CD to the temporary directory that you created.

3. Enter the following command to start the installation program: `cd` *dir_name* `lpinstaller.sh -c` *install_dir* where *install_dir* is where you installed IBM Tivoli Monitoring. Typically, the directory name is `/opt/IBM/ITM` for UNIX and Linux systems.

4. Select the language of the installer and click **OK**.

5. In the Introduction panel, click **Next**.

6. Click **Add/Update** and click **Next**.

7. Select the folder where the National Language Support package (`NLSPackage`) files are located. Typically, the `NLSPackage` files are located in the `nlspackage` folder where the installer executable file is located.

8. Select the language support for the agent of your choice and click **Next**. To make multiple selections, press Ctrl and select the language that you want.

9. Select the languages that you want to install and click **Next**.

10. Examine the installation summary page and click **Next** to begin installation.

11. After installation completes, click **Finish** to exit the installer.

12. Restart the Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Eclipse Help Server if any of these components are installed.

Installing language packs on Windows, UNIX, or Linux systems silently

You can use the silent-mode installation method to install the language packs. In silent mode, the installation process obtains the installation settings from a predefined response file. It does not prompt you for any information.

Before you begin

First, make sure that you installed the product in the English language.

Procedure

1. Copy and paste the `ITM_Agent_LP_silent.rsp` response file template as shown in "Response file example."
2. Change the following parameter settings:

   NLS_PACKAGE_FOLDER
   > Folder where the National Language Support package (NLSPackage) files are located. Typically, the NLSPackage files are located in the `nlspackage` folder, for example: `NLS_PACKAGE_FOLDER = //tmp//LP//nlspackage`.

   PROD_SELECTION_PKG
   > Name of the language pack to install. Several product components can be included in one language package. You might want to install only some of the available components in a language pack.

   BASE_AGENT_FOUND_PKG_LIST
   > Agent for which you are installing language support. This value is usually the same as *PROD_SELECTION_PKG*.

   LANG_SELECTION_LIST
   > Language you want to install.

3. Enter the command to install the language pack with a response file (silent installation):
   - For Windows systems:

     `lpinstaller.bat -f` *path_to_response_file*
   - For UNIX or Linux systems:

     `lpinstaller.sh -c` *candle_home* `-f` *path_to_response_file*

     where *candle_home* is the IBM Tivoli Monitoring base directory.

Response file example

```
#     IBM Tivoli Monitoring Agent Language Pack Silent Installation Operation
#
#This is a sample response file for silent installation mode for the IBM Tivoli
#Monitoring Common Language Pack Installer.
#.
#This file uses the IBM Tivoli Monitoring Common Agent Language Pack with the
#install package as an example.
#Note:
#This response file is for the INSTALLATION of language packs only.
#This file does not support UNINSTALLATION of language packs in silent mode.
#-------------------------------------------------------------------------------
#-------------------------------------------------------------------------------
#To successfully complete a silent installation of the the example of Common Agent
#localization pack, complete the following steps:
#
#1.Copy ITM_Agent_LP_silent.rsp to the directory where lpinstaller.bat or
#lpinstaller.sh is located (IBM Tivoli Monitoring Agent Language Pack build
#location).
#
#2.Modify the response file so that it is customized correctly and completely for
#your site.
#  Complete all of the following steps in the response file.
#
#3.After customizing the response file, invoke the silent installation using the
#following command:
#For Windows:
#    lpinstaller.bat -f <path_to_response_file>
#For UNIX and Linux:
#    lpinstaller.sh -c <candle_home> -f <path_to_response_file>
#Note:<candle_home> is the IBM Tivoli Monitoring base directory.
#-------------------------------------------------------------------------------
```

```
#------------------------------------------------------------------------------
#Force silent install mode.
#------------------------------------------------------------------------------
INSTALLER_UI=silent
#------------------------------------------------------------------------------
#Run add and update actions.
#------------------------------------------------------------------------------
CHOSEN_INSTALL_SET=ADDUPD_SET
#------------------------------------------------------------------------------
#NLS Package Folder, where the NLS Packages exist.
#For Windows:
#   Use the backslash-backslash(\\) as a file separator (for example,
#C:\\zosgmv\\LCD7-3583-01\\nlspackage).
#For UNIX and Linux:
#   Use the slash-slash (//) as a file separator (for example,
#//installtivoli//lpsilenttest//nlspackage).
#------------------------------------------------------------------------------
#NLS_PACKAGE_FOLDER=C:\\zosgmv\\LCD7-3583-01\\nlspackage
NLS_PACKAGE_FOLDER=//tmp//LP//nlspackage
#------------------------------------------------------------------------------
#List the packages to process; both variables are required.
#Each variable requires that full paths are specified.
#Separate multiple entries with a semicolon (;).
#For Windows:
#           Use the backslash-backslash(\\) as a file separator.
#For Unix and Linux:
#           Use the slash-slash (//) as a file separator.
#------------------------------------------------------------------------------
#PROD_SELECTION_PKG=C:\\zosgmv\\LCD7-3583-01\\nlspackage\\KIP_NLS.nlspkg
#BASE_AGENT_FOUND_PKG_LIST=C:\\zosgmv\\LCD7-3583-01\\nlspackage\\KIP_NLS.nlspkg
PROD_SELECTION_PKG=//tmp//LP//nlspackage//kex_nls.nlspkg;//tmp//LP//nlspackage//
koq_nls.nlspkg
BASE_AGENT_FOUND_PKG_LIST=//tmp//LP//nlspackage//kex_nls.nlspkg;//
tmp//LP//nlspackage//koq_nls.nlspkg
#------------------------------------------------------------------------------
#List the languages to process.
#Separate multiple entries with semicolons.
#------------------------------------------------------------------------------
LANG_SELECTION_LIST=pt_BR;fr;de;it;ja;ko;zh_CN;es;zh_TW
```

Prerequisites checking

The Prerequisite Scanner utility verifies whether all prerequisites that are required for the agent installation are met. The Prerequisite Scanner creates a log file that contains a report of all prerequisites checks when the Prerequisite Scanner was run.

For the Microsoft BizTalk Server agent, the Prerequisite Scanner verifies the following requirements:

- Memory
- Disk
- Operating systems
- Microsoft BizTalk Server versions

Additionally, the Prerequisite Scanner verifies whether the user, who installs the agent, is a member of the Administrators group.

For detailed information about installation prerequisites, see the Software product compatibility reports (http://www-969.ibm.com/software/reports/compatibility/clarity/index.html).

You can run the Prerequisite Scanner in stand-alone mode or remotely. For more information about the Prerequisite Scanner, see "Prerequisite Checking for IBM Tivoli Monitoring agents" in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Running as a non-administrator user

You can run the monitoring agent for BizTalk Server as a non-administrator user; however, some functionality is unavailable.

To create a non-administrator user, create a new user (non-administrator) and set up registry permissions for the new user as follows:
- Full access to the `HKEY_LOCAL_MACHINE\SOFTWARE\Candle` directory
- Read access to the `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Perflib` directory

If you define these permissions for a non-administrator user, data is displayed for all the Perfmon-based attribute groups. See "Data sources" on page 6 for a list of all the Perfmon-based attributes. The non-administrator user must be a member of the *Performance Monitor Users* and *Performance Log Users*.

The following attribute groups show data for users who are members of the *Administrators* group:
- Availability
- Messagebox Database
- Management Database
- Rule Engine Database
- BAM Database
- Tracking Database
- Application Status
- Send Port Status
- Orchestration Status
- Receive Location Status
- Service Instance Status and Class
- BizTalk Group Server Host
- Send Port Group Status
- BizTalk Server
- BizTalk Host
- Receive Ports

Agent-specific installation and configuration

In addition to the installation and configuration information in the *IBM Tivoli Monitoring Installation and Setup Guide*, use this agent-specific installation and configuration information to install the Microsoft BizTalk Server agent.

Configuration values

For both local and remote configuration, you provide the configuration values for the agent to operate.

When you are configuring an agent, a panel is displayed so you can enter each value. When a default value exists, this value is pre-entered into the field. If a field represents a password, two entry fields are displayed. You must enter the same value in each field. The values you type are not displayed to help maintain the security of these values.

The configuration for this agent is organized into the following groups:

**Configuration for the Application Status attribute group
(KQB_APPLICATION_CONFIGURATION_EXE)**

You can configure the BizTalk Application Status attribute group by using the graphical interface or the command-line interface. The configuration elements defined in this group are always present in the agent's configuration.

The configuration elements defined in this group are always present in the agent's configuration.

This group defines information that applies to the entire agent.

API File Path (KQB_API_FILEPATH)

Type `Default` or specify the full path of the `Microsoft.BizTalk.ExplorerOM.dll file`.

The type is string.

This value is required.

The default value is **default**.

Command-line configuration option for API File Path:
`KQB_APPLICATION_CONFIGURATION_EXE.KQB_API_FILEPATH`

Use Windows Authentication (KQB_DBACCESS_USE_WINDOWS_AUTHENTICATION)

Type `True` or `False`. If you type False, then specify the database user ID and password. If you type True to select the Windows Authentication mode, you do not have to specify the user ID and password to access the BizTalk Management database.

The type is string.

This value is required.

The default value is **true**.

Command-line configuration option for Windows Authentication:
`KQB_APPLICATION_CONFIGURATION_EXE.KQB_DBACCESS_`
`USE_WINDOWS_AUTHENTICATION`

Database User ID (KQB_DB_USER_ID)

Type the user ID for the BizTalk Management database.

The type is string.

This value is optional.

Command-line configuration option for Database User ID:
`KQB_APPLICATION_CONFIGURATION_EXE.KQB_DB_USER_ID`

Database Password (KQB_DB_USER_PWD)

Type the password for the BizTalk Management database.

The type is password.

This value is optional.

Command-line configuration option for Database Password:
`KQB_APPLICATION_CONFIGURATION_EXE.KQB_DB_USER_PWD`

You can configure the agent from the graphical interface in two ways:

- By using the **Configure Advanced** option from the Manage Tivoli Enterprise Monitoring Services (MTEMS) window for the BizTalk Server agent.
- By using the **Configure** option from the Tivoli Enterprise Portal Client

To configure the agent by using the command-line interface:

1. Enter the following command to log in to the command-line interface: **tacmd configuresystem -m** *managedsystemname*–**p KQB_APPLICATION_CONFIGURATION_EXE.KQB_API_FILEPATH=Default**

KQB_APPLICATION_CONFIGURATION_EXE.KQB_DBACCESS_USE_WINDOWS_AUTHENTICATION=**true** where *managedsystemname* is the computer on which you have installed the BizTalk Server agent, and *filepath* is the API file path.

2. Select the Windows Authentication mode by running the following command: **tacmd configuresystem -m** *managedsystemname*–**p KQB_APPLICATION_CONFIGURATION_EXE.KQB_API_FILEPATH=Default KQB_APPLICATION_CONFIGURATION_EXE.KQB_DBACCESS_USE_WINDOWS_AUTHENTICATION=true** where *filepath* is the API file path.-OR- Select the SQL Authentication mode by running the following command: **tacmd configuresystem -m** *managedsystemname*-**p KQB_APPLICATION_CONFIGURATION_EXE.KQB_API_FILEPATH=Default KQB_APPLICATION_CONFIGURATION_EXE.KQB_DBACCESS_USE_WINDOWS_AUTHENTICATION=false KQB_APPLICATION_CONFIGURATION_EXE.KQB_DB_USER_ID=***user ID***KQB_APPLICATION_CONFIGURATION_EXE.KQB_DB_USER_PWD=***password* where *user ID* and *password* are the user ID and password for the BizTalk Management database.

Remote installation and configuration

You can install the monitoring agent remotely from the Tivoli Enterprise Portal or from the command line.

When installing the agent remotely, you must provide the configuration values for the agent to operate. See "Configuration values" on page 13.

To install from the portal, see the *IBM Tivoli Monitoring Installation and Setup Guide*.

To remotely install or configure an agent through the Tivoli Enterprise Portal, you must have installed the application support for that agent (Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal). You must also have installed the agent bundle into the Remote Deploy Depot.

For information about displaying the configuration options that are available to use with the **configureSystem** or **addSystem** commands see "tacmd describeSystemType" in the *IBM Tivoli Monitoring Command Reference*.

If you are using the command line, the following command is an example of remote installation and configuration for Windows operating systems:

```
tacmd addSystem -t QB -n Primary:sample.node.name:NT
-p  KQB_APPLICATION_CONFIGURATION_EXE.KQB_API_FILEPATH=value
 KQB_APPLICATION_CONFIGURATION_EXE.KQB_DBACCESS_USE_WINDOWS_AUTHENTICATION=value
 KQB_APPLICATION_CONFIGURATION_EXE.KQB_DB_USER_ID=value
 KQB_APPLICATION_CONFIGURATION_EXE.KQB_DB_USER_PWD=value
```

Setting up the Microsoft BizTalk Server agent in a cluster environment

You can set up the Microsoft BizTalk Server agent in a Microsoft Cluster Server environment.

To use this monitoring agent in a Microsoft Cluster Server environment requires special configuration.

The *IBM Tivoli Monitoring Installation and Setup Guide* contains an overview of clustering. The information provided here is specifically for installing and setting up the Microsoft BizTalk Server agent in a Microsoft Cluster Server environment.

Requirements

The BizTalk Server agent supports monitoring of the Microsoft BizTalk Server 2006, Microsoft BizTalk Server 2006 Release 2, Microsoft BizTalk Server 2009, and Microsoft BizTalk Server 2010 when the BizTalk Servers are configured in a cluster environment.

In addition to installing and setting up the Microsoft BizTalk Server agent, the following three additional steps are required for the cluster environment:

- Creating a monitoring agent cluster resource in the Resource Group of the BizTalk Server
- Setting the **CTIRA_HOSTNAME** environment variable to a common value for the BizTalk Server agent (*cluster name*.**TYPE=REG_EXPAND_SZ**)
- Setting the **CTIRA_HIST_DIR** environment variable to a common disk location if history is stored at the monitoring agents (when history for the Monitoring Agent for Microsoft BizTalk Server is configured to be stored at the monitoring agent)
- Setting the **KFW_TOPOLOGY_CLUSTER_LIST** environment variable for the Tivoli Enterprise Portal Server.

On Windows systems, IBM Tivoli Monitoring requires that monitoring agents are installed in the same directory path as the OS agent. Therefore, each node in a cluster must have installed all monitoring agents (on the nodes system disk) that are required to support the cluster applications that can run on that cluster node.

Installing and configuring the monitoring agent

You can install the monitoring agent for Microsoft BizTalk Server on each node in the cluster where it is possible for the Microsoft BizTalk Virtual Server to run.

1. Setting the **CTIRA_HOSTNAME** environment variable

   You may include multiple instances of the Monitoring Agent for Microsoft BizTalk Server. You must configure each instance with a **CTIRA_HOSTNAME**. Set the **CTIRA_HOSTNAME** environment variable to *cluster name*.**TYPE=REG_EXPAND_SZ**. By setting the **CTIRA_HOSTNAME** for all BizTalk agents in the cluster to the same name, you can navigate to all of the monitoring agents for that cluster in the Tivoli Enterprise Portal Server.

2. Setting the **CTIRA_HIST_DIR** environment variable

   If history for the Monitoring Agent for Microsoft BizTalk Server is configured to be stored at the monitoring agent, each instance of the monitoring agent must be configured with a common **CTIRA_HIST_DIR** that points to a shared disk directory.

   If history is stored at the Tivoli Enterprise Management Server, setting the **CTIRA_HIST_DIR** is not required. Storing history at the Tivoli Enterprise Management Server puts a higher burden on that server.

   The *shared disk* is a disk that is owned by the Microsoft BizTalk Server. By using the shared disk, the history file can be maintained from whichever node the BizTalk Server agent is running. When the agent follows the Microsoft BizTalk Server during failover, the agent can store historical data to that common location and the history data is contiguous.

   Note: In **CTIRA_HIST_DIR** settings, you cannot use the shared directory. You must use external physical shared disk for storing the historical data.

3. Setting the **KFW_TOPOLOGY_CLUSTER_LIST** environment variable

   For the Tivoli Enterprise Portal Server, set the value of the **KFW_TOPOLOGY_CLUSTER_LIST** environment variable to AFF_MS_BIZTALK.

Creating a resource

You can create a resource for the instances of the monitoring agent on the nodes of the cluster environment.

For Windows 2003 systems, use the following steps to create a resource:

1. Click **Start > Administrative Tools > Cluster Administrator**.
2. Select the group for the instance that is being worked.
3. Right-click the group, and then click **New > Resource**.
4. In the New Resource window, specify values of the following fields as follows:

Name: BiztalkAgentResource

Description: Description about the resource

Resource type: Generic Service

Group: BizTalkTest

5. In the Possible Owners window, accept the default settings of **all Available Nodes**.
6. In the Dependencies window, add dependencies on the history disk.
7. In the Generic Service Parameters window, specify values of the following fields as follows:

    Service name: KQBCMA

    Start Parameters: `C:\IBM\ITM\TMAITM6\kqbagent.exe`

8. Click **Finish**.
9. Bring the agent resources online.
10. Repeat these steps for the other instances of the monitoring agent in other nodes of the cluster environment.

Creating a service

You can create a service for the instances of the monitoring agent in the cluster environment.

For Windows 2008 systems, use the following steps to create a service:

1. Click **Start > Programs > Administrative Tools > Failover Cluster Management**.
2. In the navigation pane, expand **cluster name**.
3. Right-click **Services and Applications** and click **Configure a Service or Application**. The High Availability wizard opens.
4. On the Select Service or Application page, select **Generic Service** from the list of services and click **Next**.
5. On the Select Service page, select **Monitoring Agent for Microsoft BizTalk Server – Primary** from the list and click **Next**.
6. On the Client Access Point page, specify a name for the cluster service, select an IP address from the list of networks, and click **Next**.
7. On the Select Storage page, select the storage (if available).
8. Retain the default registry settings on the Replicate Registry Settings page and click **Next**.
9. Confirm the details on the Confirmation page and click **Next**.
10. On the Summary page, click **Finish**. The service is created under Services and Applications.
11. Right-click the service name that you have created and click **Properties**.
12. In the Properties window, under Preferred owners, select the node names for the failover cluster and click **OK**.

Making configuration changes

After you give the control of the agent cluster resource to the Cluster Server, you must change the agent cluster resource status to offline to make configuration changes or edit the agent variables on the node from which the agent cluster resource runs.

If the agent cluster resource status is not offline when the agent config utility attempts to change the status of the agent offline, the Cluster Server receives the status of the monitoring agent as offline and attempts to change the status of the monitoring agent to online. When you complete the configuration changes for the monitoring agent, change the agent cluster resource status to online.

Appendix. ITCAM for Microsoft Applications documentation library

Various publications are relevant to the use of ITCAM for Microsoft Applications.

For information about how to access and use the publications, see **Using the publications** (http://www.ibm.com/support/knowledgecenter/SSTFXA_6.3.0.1/com.ibm.itm.doc_6.3/common/using_publications.htm).

To find publications from the previous version of a product, click **Previous versions** under the name of the product in the **Contents** pane.

Documentation for this product is in the ITCAM for Microsoft Applications Information Center (http://www.ibm.com/support/knowledgecenter/SSDKXQ_6.3.1/com.ibm.itcamms.doc_6.3.1/welcome_msapps631.html)
- Quick Start Guides
- Offering Guide
- Download instructions
- Links to Prerequisites
- Installation and Configuration Guide for each agent
- Link to Reference information for each agent
- Link to Troubleshooting Guide for each agent

Prerequisite publications

To use the information about the agents effectively, you must have some prerequisite knowledge.

See the following information at the IBM Tivoli Monitoring Information Center (http://www.ibm.com/support/knowledgecenter/SSAUBV/com.ibm.omegamon_share.doc_6.3.0.2/shared_welcome/welcome.htm) to gain prerequisite knowledge:
- *IBM Tivoli Monitoring Administrator's Guide*
- *IBM Tivoli Monitoring Installation and Setup Guide*
- *IBM Tivoli Monitoring High Availability Guide for Distributed Systems*
- IBM Tivoli Monitoring: Installation and Configuration Guides for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: User's Guides for the following agents: Agentless OS monitors, Log file agent, System p agents, Systems Director base agent
- *IBM Tivoli Monitoring Agent Builder User's Guide*
- *IBM Tivoli Monitoring Command Reference*
- *IBM Tivoli Monitoring: Messages*
- *IBM Tivoli Monitoring Troubleshooting Guide*
- IBM Tivoli Monitoring: References for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: Troubleshooting Guides for the following agents: Operating System agents and Warehouse agents
- *Tivoli Enterprise Portal User's Guide*

Related publications

The publications in related information centers provide useful information.

See the following information centers, which you can find by accessing Tivoli Documentation Central (https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/Tivoli%20Documentation%20Central):
* Tivoli Monitoring
* Tivoli Application Dependency Discovery Manager
* Tivoli Business Service Manager
* Tivoli Common Reporting
* Tivoli Enterprise Console
* Tivoli Netcool/OMNIbus

Tivoli Monitoring Community on Service Management Connect

Service Management Connect (SMC) is a repository of technical information that is organized by communities.

Access Service Management Connect at https://www.ibm.com/developerworks/servicemanagement.

For information about Tivoli products, see the Application Performance Management community (http://www.ibm.com/developerworks/servicemanagement/apm/index.html).

Connect, learn, and share with Service Management professionals. Get access to developers and product support technical experts who provide their perspectives and expertise. You can use SMC for these purposes:
* Become involved with transparent development, an ongoing, open engagement between other users and IBM developers of Tivoli products. You can access early designs, sprint demonstrations, product roadmaps, and prerelease code.
* Connect one-on-one with the experts to collaborate and network about Tivoli and the Application Performance Management community.
* Read blogs to benefit from the expertise and experience of others.
* Use wikis and forums to collaborate with the broader user community.

Other sources of documentation

You can obtain additional technical documentation about monitoring products from other sources.

See the following sources of technical documentation about monitoring products:
* IBM Integrated Service Management Library (http://www.ibm.com/software/brandcatalog/ismlibrary/) is an online catalog that contains integration documentation as well as other downloadable product extensions.
* IBM Redbook publications (http://www.redbooks.ibm.com/) include Redbooks® publications, Redpapers, and Redbooks technotes that provide information about products from platform and solution perspectives.
* Technotes (http://www.ibm.com/support/entry/portal/software), which are found through the IBM Software Support website, provide the latest information about known product limitations and workarounds.

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